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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,418	09/26/2003	Bong-joo Kim	45713	5728

7590 02/01/2005

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Washington, DC 20036

EXAMINER

HAUGLAND, SCOTT J

ART UNIT	PAPER NUMBER
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3654

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,418

Applicant(s)

KIM ET AL.

Examiner

Scott Haugland

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/8/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-6, drawn to a clutch in a reel disc assembly, classified in class 242, subclass 349.
- II. Claim 7, drawn to a clutch in a reel assembly driving apparatus, classified in class 242, subclass 356.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as in a tape recorder having a reel assembly driving apparatus such as that of the prior art shown in Fig. 2 of the application. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Mark Hrozenchik on Jan. 19, 2005 a provisional election was made with traverse to prosecute the invention of group I, claims 1-6. Affirmation of this election must be made by applicant in replying to this Office action. Claim 7 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (U.S. Patent No. 4,917,328) in view of Godwin, Jr. et al (U.S. Patent No. 4,494,712).

Kobayashi et al discloses a reel clutch of a tape recorder installed in a reel disc assembly, the reel clutch comprising a spring 5 positioned between a reel gear 3 and reel disc (lower portion of reel table 2) and a stopper reel (upper portion of reel table 2) engaged with the reel disc to restrain the engaging height of the spring 5 so that the reel disc and spring come into contact with each other.

Kobayashi et al does not disclose a plate spring positioned between the reel gear and the reel disc.

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Godwin, Jr. et al teaches providing a plate spring 64 between a reel gear 66 and a reel disc 60' of a tape recorder to limit the torque transmitted from the reel gear to a reel of tape in the tape recorder.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Kobayashi et al with a plate spring between the reel gear and reel disc as taught by Godwin, Jr. et al in lieu of the coil spring 5 of Kobayashi et al to provide a more compact reel drive structure.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Godwin, Jr. et al as applied to claim 1 above, and further in view of Hong et al (U.S. Doc. No. 2002/0070304).

Kobayashi et al does not disclose a plate spring comprising a plate body formed with one or more slits in a predetermined pattern.

Hong et al teaches forming plate spring 70 with one or more slits (between legs 75) in a predetermined pattern to provide the spring with axial flexibility and elasticity.

It would have been obvious to one having ordinary skill in the art to provide Kobayashi et al with a plate spring having one or more slits in a predetermined pattern to provide the required resilient biasing force between the reel gear and reel disc.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Godwin, Jr. et al as applied to claim 1 above, and further in view of Katahira et al (U.S. Patent No. 3,913,868).

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Kobayashi et al does not disclose lubricant interposed between the reel disc and the plate spring.

Katahira et al teaches providing lubricant 38, 40 between relatively rotating engaging surfaces of a tape reel drive assembly to control the torque transmitted to a driven tape reel during slippage between the surfaces (col. 3, lines 45-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Kobayashi et al with lubricant interposed between the reel disc and the plate spring as taught by Katahira et al to improve the control of the torque transmitted to the tape reel, e.g., by preventing excessively high torques before slippage occurs between the clutch elements.

Allowable Subject Matter

Claims 2, 5, and 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Primosch et al and Lee are cited to show tape reel rotation sensors. Chiu et al and Seo et al are cited to show plate springs of limited torque transmitting mechanisms in tape drives. Shinohara et al is cited to show a tape drive that limits torque transmitted to tape reels.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (703) 305-6498. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (703) 308-2688. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


sjh
1/27/05


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